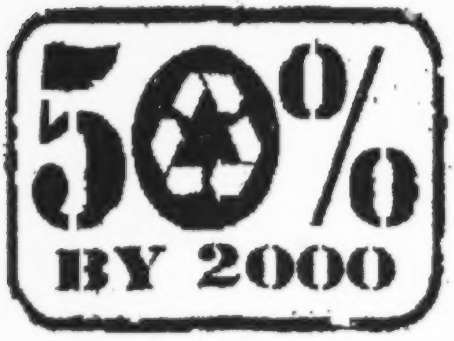
Status Report 2000

of

Solid Waste-Resource Management in Nova Scotia

Nova Scotia
Too Good To Waste



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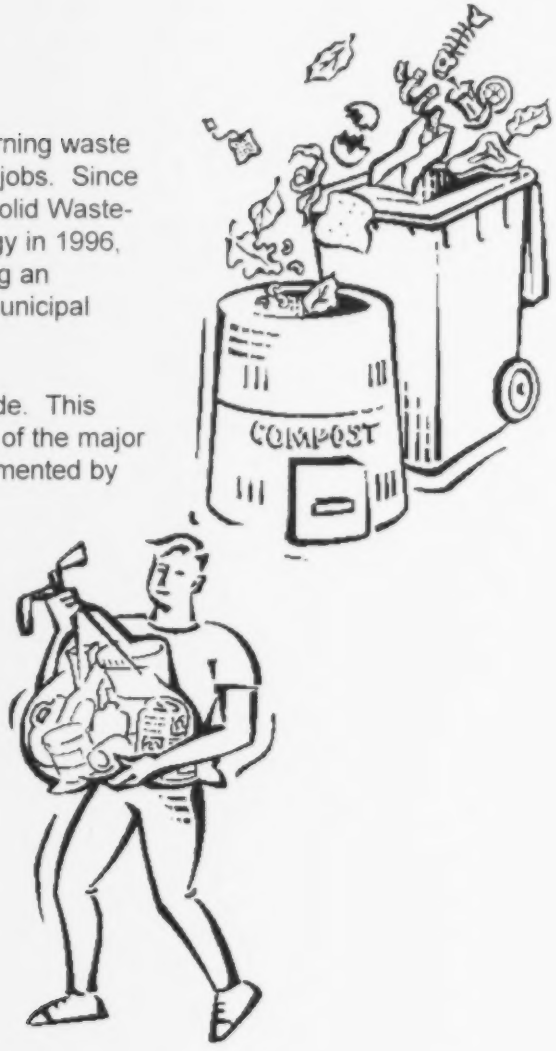
Waste-Resource Management in Nova Scotia

Foreword

Nova Scotia has excelled at turning waste into value-added products and jobs. Since the release of the Province's Solid Waste-Resource Management Strategy in 1996, Nova Scotian's are now sending an incredible **47%** less waste to municipal disposal sites.

A lot of progress has been made. This report gives a brief description of the major initiatives that have been implemented by Nova Scotians. While all initiatives are important they are too numerous to include. This report provides a snapshot of successful waste-resource management activities in Nova Scotia.



1. The Nova Scotia Strategy: Summary

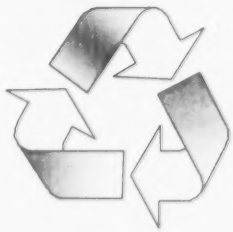
When the Nova Scotia Environment Act became law in January 1995, the province formally adopted the Canadian target of 50% diversion of solid waste from disposal by the year 2000. The Act also committed the Department of the Environment to develop a comprehensive strategy for the management of solid waste resources in Nova Scotia. That commitment resulted in the November 1995 release of the document, "Solid Waste Resource Management: A Strategy for Nova Scotians."

The strategy followed extensive consultation with people involved in all aspects of the solid waste system. Municipalities, industry representatives and members of the general public all took part. The strategy provides the following benefits:

- maximizes environmental protection;
- maximizes economic activity; and
- minimizes the potential increases in the cost of managing solid waste.

The Solid Waste-Resource Management Strategy has four (4) main goals:

- Achieve 50 percent diversion by December 31, 2000.
- Implement new disposal standards by December 31, 2005.
- Achieve greater regional cooperation to reduce costs.
- Increase economic opportunities through recognition of waste as a resource.



Since the strategy was formally adopted, there have been many initiatives implemented to support its goals. The remainder of this report will present the major activities that have taken place.

2. Resource Recovery Fund Board (RRFB)

The Resource Recovery Fund Board Inc. (RRFB) is a private, not-for-profit organization that has been directed under an act of the Nova Scotia Legislature to administer a substantial portion of the Solid Waste-Resource Management Strategy. Its Board of Directors has representation from industry, municipalities, and the provincial government.

The RRFB has five mandates:

1. Fund municipal or regional diversion programs
2. Develop and operate a Deposit/Refund System for Beverage Containers
3. Develop and implement industry stewardship programs
4. Develop education and awareness of reduction, reuse, recycling and composting
5. Promote the development of value-added manufacturing in the Province

Highlights since April 1, 1996:

- Established a network of over 90 Enviro-Depots and five Regional Processing Facilities
- Administer the Deposit/Refund system for beverage containers
- Instituted the Used Tire Management Program to recycle used tires
- More than 678 million beverage containers recycled through Enviro-Depot network
- 2.3 million tires recycled
- $20.4 million to municipalities through diversion credits and approved funding programs to assist municipalities in offsetting their costs of meeting the goals and objectives established through the Solid Waste Resource Management Strategy.
- 600 jobs created through RRFB programs
- $2.9 million Industry funding to promote value-added products from materials diverted from disposal
- Another $1.7 million has been utilized on a provincial education program.

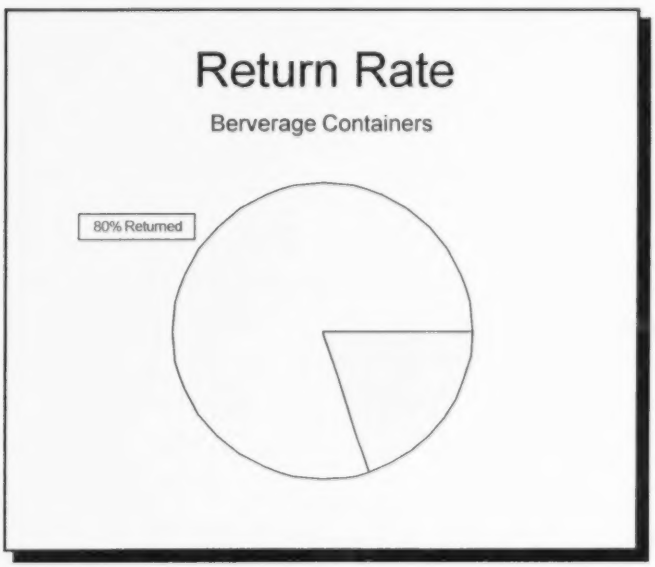
3. Beverage Container Recycling program

The Deposit/Refund System for Beverage Containers, which came into effect April 1, 1996, applies to all ready-to-serve beverages with the exception of dairy products.

Consumers pay a 10-cent deposit on each non-alcoholic beverage container and on each alcoholic beverage container =< 500ml purchased. A 5-cent refund is given for each of these containers that are returned to an Enviro-Depot. Alcoholic beverages > 500ml have a 20-cent deposit with a 10-cent return.

Highlights:

- Nova Scotians return approximately 140 million beverage containers annually
- The return rate on beverages sold in Nova Scotia is almost 80%
- Since April 1, 1996, over 678 million beverage containers have been recycled



4. Curbside Recycling

Curbside recycling programs provide a convenient means for recycling materials banned from disposal in Nova Scotia. A list of the banned materials in municipal programs is as follows:

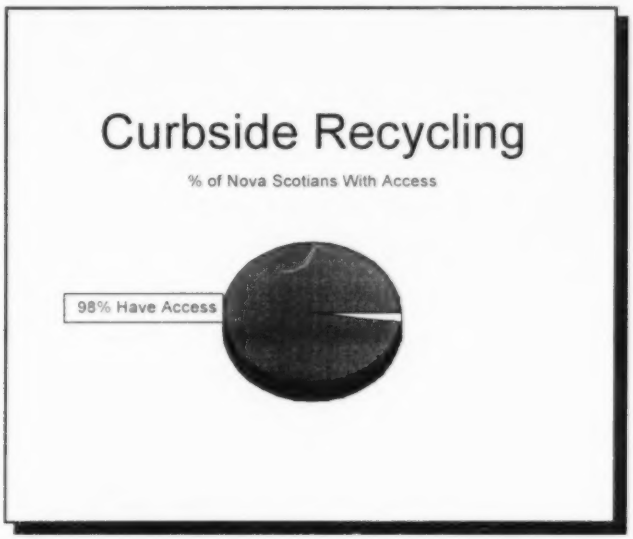
Corrugated cardboard	Newsprint
Beverage Containers	Glass food containers
Steel/tin food containers	#2 HDPE containers

Some municipalities collect items beyond those that are banned such as mixed paper, magazines, plastic containers numbered 1 through 6, aluminum containers, aluminum pie plates, etc.

In each of the waste management plans developed by the regions, curbside recycling was identified as an important tool to achieve 50% diversion.

How are we doing?

- Residents and municipalities representing 91% of the population of Nova Scotian have access to curbside recycling.
- 50 of 55 municipalities in the Province have implemented or participate in municipal curbside recycling programs.



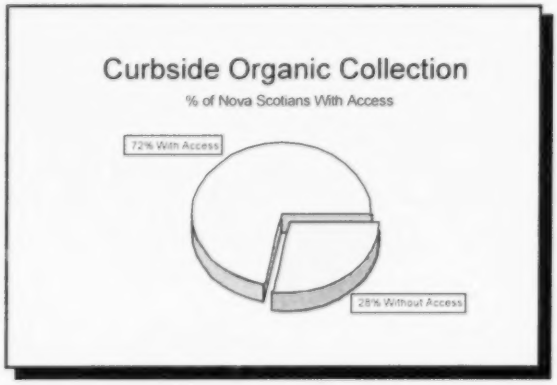
5. Composting

30 - 50% of all our garbage is organic material such as food scraps, leaves, grass clippings, garden waste and non-recyclable paper. Organic material, when exposed to water, forms a liquid called leachate. Leachate picks up contaminants from the surrounding garbage and can pollute neighbouring water resources if it escapes from the landfill site. Organic matter frequently decays anaerobically in landfills producing methane, a gas that contributes to global warming. Keeping organic materials out of landfills and turning it into a valuable resource, compost, that enhances the soil, is one way to reduce environmental risk.

The Department of the Environment banned compostable organic material from landfills November 30, 1998. This is a progressive step that places Nova Scotia among the leaders in waste management in North America. No other province in Canada has implemented such a ban.

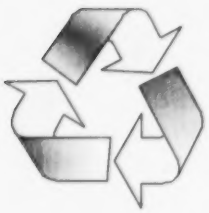
How are we doing?

- 72% of the population of Nova Scotia, live in municipalities that offer curbside collection of organic materials to their residents for delivery to a centralized composting facility:



- Back yard composting programs have also been implemented in many areas of Nova Scotia. This method is effective in managing some organic wastes, and allows the home owner to close the waste loop by making useable compost on their own property.

6. Public Education and Awareness



It has been said in the field of waste-resource management that the 3R's are really "education", "education", "education". Although we cannot forget what the 3R's really stand for, education is one of the most important elements in ensuring successful diversion programs. To that end, the Resource Recovery Fund Board Inc. (RRFB) has been mandated to develop a province-wide public education and awareness campaign for waste diversion.

How are we doing?

To implement a public education and awareness program for Nova Scotia, the RRFB formed partnerships with local education contractors and one provincial education contractor.

The local contractors work with each of the seven regions to visit schools and attend Provincial events (ie. home shows) around Nova Scotia.

The provincial education contractor develops provincial education materials as well as coordinates media advertising of key waste reduction messages.

In addition to its contracts with the local and provincial contractors, the RRFB contributes $210,000 each year to municipalities toward the cost of Regional Waste Reduction Coordinators. The RRFB is contributing over $1,000,000 in fiscal 1999 towards educating Nova Scotians about the 3R's and composting in their communities.

The RRFB operates a recycling and composting information hotline for the entire province at 1-877-313-7732.

7. Tire Recycling

On January 2, 1997, the Used Tire Management Program began collecting used tires for recycling. Now, all used tires that are left with registered tire retailers, are diverted from disposal sites in Nova Scotia. There are approximately 900 registered tire retailers throughout the Province.

When new tires are purchased in Nova Scotia, a $3 environmental fee for each car tire and a $9 fee for each truck tire over 17 inches, is charged to support this new recycling program. Each year, Nova Scotians generate approximately 900,000 used tires for disposal. Removing tires from disposal sites reduces waste and removes a potential fire and health hazard.

A new tire recycling plant is currently under construction in Colchester County, Nova Scotia. The plant will crumb tires for the manufacturing of various products.

A surplus of funds has been generated through the Used Tire Management Program and the RRFB has designated that money for the clean up of old tire stockpiles located throughout Nova Scotia. From April 1, 1999 to March 31, 2000, $600,000 will be used for the clean up of an estimated 300,000 tires.

Highlights:

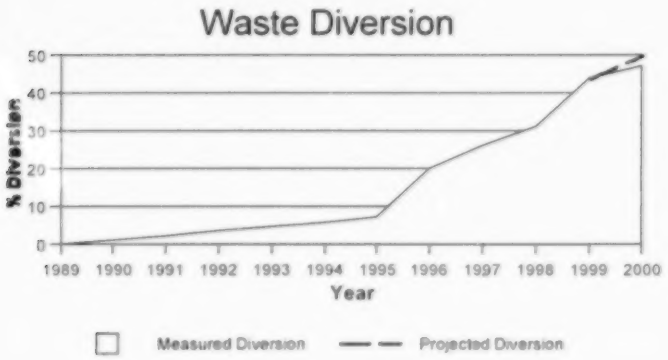
- Stewardship agreements have been signed with approximately 900 tire retailers.
- More than 2.3 million tires have been recycled through Registered Tire Retailers since the introduction of the Used Tire Management Program
- Over 50,000 passenger tire equivalents have been recovered and recycled from old tire stockpiles

8. Measuring Diversion: 47% and Climbing!

Nova Scotians are practising the 3Rs, Reduce, Reuse and Recycle, and are composting like never before. From Enviro-Depots, to municipal curbside programs and tire recycling, to simply practising smarter buying habits, Nova Scotians have caught on to waste reduction. Evidence of this can be found in the diversion rate we have achieved.

How are we doing?

- As of October 1999, Nova Scotians diverted 47% of solid waste from landfills and incinerators. This diversion rate continues to climb.
- In 1989, each Nova Scotian threw out 712 kg of garbage per year. This was reduced to 381 kg this year.
- The amount of landfill space saved across the province from diverting waste is the equivalent to eliminating 8 average sized landfills.
- We are on track to meet 50% diversion by the year 2000.



9. Landfilling and Incineration

Disposal sites are a necessary component of managing waste. However, we are reducing the quantity of material incinerated and the volume of landfill space required for disposal through the 3 R's and composting. Also, through design improvements we can better protect our environment. This is one of the goals of the strategy.

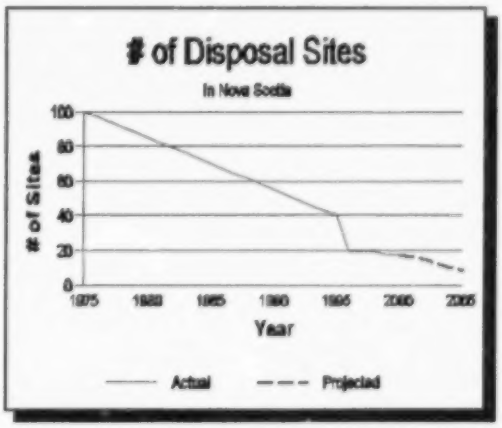
In the early 1970s there were in excess of 100 dumps operating, most of which employed open burning as a means of disposal. These facilities used little or no pollution control measures, and resulted in emissions of particulate matter, carbon monoxide, dioxins and furans.

By 1996, twenty (20) open burning sites remained in operation. On April 1 of that year however, the Department of the Environment banned open burning as a means of disposal, and all existing sites were shut down.

To protect the environment the province now requires all new landfills to use plastic and soil liner systems and to collect and treat the leachate. These new systems called "containment landfills," ensure that leachate does not pollute ground water but instead, is drained away to collection areas and treated. All existing landfills are required to meet these standards by the year 2005.

How are we doing?

- Only 18 municipal solid waste disposal sites remain in Nova Scotia.
- Disposal sites in Cumberland and Colchester Counties and Halifax Regional Municipality meet the new landfill guidelines.
- A waste to energy incinerator in Cape Breton has emission controls that exceed provincial and national emission standards.
- It is anticipated that the number of disposal sites will be reduced to 7-10 by the year 2005.



We are moving toward fewer, better landfills.

10. Economic Opportunities

Nova Scotia was built on its resources of fishing, mining, and forestry. Now we are looking to our newest resource, **solid waste**, to create economic and employment opportunities for Nova Scotians.

How are we doing?
Following are just a few examples of the many opportunities that result from recognizing our waste as a resource:

- Novapet Inc. is a new plastics processing facility located in Amherst, Nova Scotia. Novapet grinds PET plastic (ie. plastic pop bottles) from Nova Scotia, New Brunswick, and Newfoundland for sale to markets in Canada and the United States where it is used to manufacture items such as carpet and clothing.

- Tires are being crumbed for use in many different products

- Minas Basin Pulp and Power in Hantsport manufactures liner board from old corrugated cardboard. The liner board is used to manufacture new boxes by Maritime Paper Products.

- CKF in Hantsport manufactures paper products from old newspaper.

- USG in Port Hawkesbury adds newsprint to its manufacturing process to produce Fiberock, a wallboard.

- Thermo-Cell in Debert manufactures cellulose insulation out of old newspapers

Job Creation Through Solid Waste:

- Over 600 jobs for Nova Scotians through transportation, processing, and marketing beverage containers and other materials collected by the Enviro-Depot network.

- Over 50 jobs as a result of transporting and processing tires.

- Seasonally 10 - 14 jobs have been produced through the processing of PET plastic at Novapet.

- Over 2200 jobs in the waste-resource management sector in Nova Scotia.

11. Conclusion

Nova Scotians can be proud of what has been accomplished. We have managed to compost tens of thousands of tonnes of organic material and recycle 2.3 million tires, hundreds of thousands of tonnes of paper and plastic, steel/tin, aluminum and glass containers, and 678 million beverage containers. 678 million beverage containers placed end-to-end is enough to circle the earth at the equator.

Our 47% diversion rate is steadily increasing. Together these efforts have brought us two-thirds of the way to our goal of diverting 50% in the year 2000. Meeting that target requires continued enthusiasm, cooperation and perseverance on the part of all Nova Scotians.